

BRITISH ORTHOPTERA IN 1984

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Being sun-loving insects — the British species having a more marked preference for the South than other orders — 1984 has been a very favourable year for the Orthoptera, some of the rarer species occurring in abundance. Furthermore, some common species were discovered in areas well outside their previously known ranges.

After an unremarkable winter, the weather around Easter was exceptional, it being dry and sunny with temperatures rising to 70°F. This is the time of year when our three *Tetrix* sp. reappear after hibernating as adults.

I drove down to the New Forest on 13 April and found *Tetrix ceperoi* Bolivar to be abundant around the margins of pools at Crockford Bridge. *T. ceperoi* is a local insect, confined to localities close to the south coasts of England and Wales. Specimens from the New Forest are quite variable: many are of a monotonous grey tint; others are dark, ruddy or bear contrasting patterns of grey, white or brown; some greenish, but generally as a result of the algae coating them. The insects were active in the warm weather, many taking to the wing when disturbed or hopping into the pools to swim away underwater. Later in the morning, I continued to the coast to find fair numbers of *T. ceperoi* at Hordle Cliff on almost bare ground near damp seepages and reed beds on the cliff edge. Specimens from Hordle Cliff were not very variable, all the ones I found being an attractive pale, mottled grey, similar in colour to the ground they live on. During the afternoon I took the more bulky *T. subulata* L. on a river bank near Britford, Wilts.

Tetrix subulata has a wider distribution than *T. ceperoi*. It may be found in a variety of damp habitats over much of southern England and South Wales. Recently it was reported from a site in North Wales, well outside its known pattern of distribution. I visited the locality on 28 April. Here, the habitat consists of sparsely vegetated gravel banks by the River Dee, which must be exposed to regular flooding. The insect was especially common at a place where rock ledges form tranquil pools by the river bank, contrasting with the fast flow of the river. Some specimens of *T. subulata* were taken from these pools, where they were submerged amongst mats of algae. Some large specimens of *T. undulata* Sowerby were taken from the river bank also. Specimens of *T. subulata* from the Dee were large and all that were seen were of the normal form with a fully developed pronotum.

Mike Bryan, of Birmingham Museum, informed me that he had taken *T. subulata* at Monk Wood, Worcs. in 1983, although he had lost the specimen. This constitutes the first record for the county

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north of Worcester. On 29 April I made a point of finding further localities. *T. subulata* was common on mud by a lake near Sinton (SO/839627) and a single example was taken from the bank of the River Teme near Stanford Bridge. All were of the normal form.

On 7 May I was on the Gower peninsula. *T. ceperoi* was very abundant in a clearing amongst pines on the Whiteford Burrows dune system. I estimated that there was an average of 10 individuals per square meter and that the clearing was about a thousand square meters in area. Many of the *T. ceperoi* had delightful contrasting patterns of grey, brown and white, the term 'diamond-back' suggesting the appearance of the pronotum. Some nymphs of the grasshopper *Myrmeleotettix maculatus* Thunberg were also present. I could not find *T. ceperoi* elsewhere on the dunes.

On 6 June I was heading for the South-east. Stopping briefly at Ot Moor I took *T. subulata*. About half the specimens were of the form *bifasciata*. The following morning *T. subulata* was found again on the muddy banks of the River Arun where the dragonfly *Libellula fulva* Mueller was on the wing. During the late afternoon, both *T. subulata* (including *bifasciata*) and *T. ceperoi* were found on gravel around ponds in the Rye area, which ponds provide a home for the introduced marsh frog. This was the first time I had seen a mixed population of these two groundhoppers. On 16 June, *T. subulata* was found in Norfolk on a fen near Barton Broad and in dune slacks at Winterton. However, the Swallowtail was a rather more appealing sight than groundhoppers that day.

By late June the vegetation is dense making it difficult to locate the *Tetrix* spp. It is at this time of year that the remaining British Orthoptera are beginning to make their appearance as adults. Whilst groundhoppers are mute, almost all the other British Orthoptera stridulate. I heard the continuous ticking song of *Omocestus viridulus* L. in Wyre Forest on 30 June, when the High-brown and Silver-washed fritillaries were starting to emerge.

Whilst out looking for Odonata on July 1 in Cheshire and Shropshire, I heard my first adult *Myrmeleotettix maculatus* Thunberg of the season at Abbots Moss and Whixall Moss. *Tetrix undulata* was present at both sites in various stages of growth. Adult *Ch. parallelus* and *O. viridulus* were heard at Whixall. Unusually I did not notice the nymphs of the Bog bush-cricket, *Metrioptera brachyptera* L.: it is often abundant at Whixall. I was relieved to see that insect life had not been severely disrupted by a fire which occurred in April: *Coenonympha tullia* Mueller and *Leucorrhinia dubia* vander Linden were both on the wing.

On July 7, I was in Warwickshire. At Stockton Cutting I saw my last over-wintered *T. subulata* (a single male f. *bifasciata*) for 1984, since the majority would have died off by then. The common field grasshopper, *Chorthippus brunneus* Thunberg and meadow grasshopper, *Ch. parallelus* Zetterstedt were singing. I was surprised

by an abundance of *Ch. albomarginatus* Degeer at Ufton Fields. A recent survey (Copson, 1984) has shown that this grasshopper is widespread in this central English county. *Ch. albomarginatus* is a species that I had previously thought of as being coastal and estuarine. At Ufton it is equally at home amongst sedges and on dry limestone grassland where bee orchids grow.

The evening of 20 July, I drove to Bristol, my former home. The Dark bush-cricket was abundant amongst nettles in the Avon Gorge. The following day, I continued to the south coast, stopping on the way at Walton Hill, Somerset. Where the downland meets a woodland border, I saw the highly attractive Rufous grasshopper, *Gomphocerripus rufus* L. with its white-tipped, clubbed antennae.

About mid-day I reached Sopley Common. On a heathy knoll, the rare Heath grasshopper, *Ch. vagans* Eversmann was singing. I have noticed that it is on the southern slopes of such dry, heathy knolls in Hants. and Dorset that *Ch. vagans* becomes the dominant grasshopper. Indeed, it was the only grasshopper present over large areas of the heather. The local tiger beetle, *Cicindella sylvestris* also seemed to be confined to the top of this knoll. Lower down the slope where *Erica cinerea* gave way to *E. tetralix* and bog plants, *Ch. vagans* was absent, but there was an abundance of *M. maculatus*, *Ch. parallelus*, and *M. brachyptera*. In the afternoon, I revisited Crockford Bridge. It was now impossible to find *T. ceperoi* here. Wood crickets, *Nemobius sylvestris* F. were singing in the thickets between the ponds. Later still, I headed for the Solent, where three characteristic estuarine species were in evidence by their song: the Lesser marsh grasshopper, *Ch. albomarginatus* Degeer, the Short-winged conehead, *Conocephalus dorsalis* Latreille and the Roesel's bush-cricket, *Metriopectera roeselii* Hagenbach.

On 21 July I went to one of my favourite Cotswold sites, Stinchcombe Hill. On the warm downland there were plenty of *Ch. brunneus*, *Ch. parallelus* and *O. viridulus*. The attractive Stripe-winged grasshopper, *Stenobothrus lineatus* Panzer was about and conspicuous on account of its distinctive wheezy song. *M. maculatus* was more common on the rocky slopes. Chalkhill blue, Dark-green fritillary, Grayling and Marbled white were flying.

Although the Dark bush-cricket, *P. griseoptera* Degeer is seemingly an ubiquitous insect in some southern counties, to the north of Birmingham it is something of a rarity and often hard to find. I visited the published Leicestershire site, Owston Wood on 29 August. A small but obvious colony was found in long grass on the southern edge of the wood but I could not find it in the woodland rides (Cf. Evans, 1970).

Whilst driving over Penkridge Bank, Cannock Chase on 5 August, I heard the song of *M. brachyptera* through my car window and stopped to find a good colony amongst grass in the roadside ditch. Others were found on the adjacent moorland (See Paul, in press. a).

The second annual study of the Warwickshire Orthoptera Survey was held on 11 August, on the Warks./Oxon. border. It was hoped that *G. rufus* and *S. lineatus* might be added to the county list, but none of the downs visited looked quite suitable for them. The grasshoppers, *Ch. parallelus*, *Ch. brunneus* and *O. viridulus* were all common. The most interesting site was Rough Hill near Epwell, Oxon. Four species of grasshopper were abundant on the top — *Ch. parallelus*, *Ch. brunneus*, *O. viridulus* and surprisingly, *Ch. albomarginatus* also. The habitat consisted of dry grassland with much gorse. At Traitor's Ford, Warks., there were nymphs of *T. subulata* and Mr. J. Hardman took the first of the new adults to be seen by me in 1984. Mr. Hardman showed me a grasshopper he had taken near Warwick in 1954, which turned out to be *Ch. albomarginatus* — the earliest known county record. He was also fortunate in beating an Oak bush-cricket, *Meconema thalassinum* Degeer, from ivy at Farnborough, Warks. — the only bush-cricket of the day.

Later in August, I visited a friend in Funtley, near Fareham, Hampshire. I was hoping to find the rare *Conocephalus discolor* Thunberg during my visit. On the morning of 18 August, both *C. discolor* and the more widespread *C. dorsalis* were found in plenty in long grass at Titchfield Haven. What was surprising was that *C. discolor* — which is usually a very scarce insect in Britain — outnumbered *C. dorsalis* by a considerable margin. Furthermore, whilst *C. dorsalis* was confined to reeds and grass at Titchfield Haven, *C. discolor* was abundant along the cliffs to the west of the haven for at least a mile or so and could be heard along the roadside when driving back to Funtley. At Funtley I heard three males stridulating in my friend's unremarkable garden. In wasteground at Funtley, *C. discolor* was the commonest of the Orthoptera; many of the all-brown form and the majority were of the very long-winged form mentioned by Ragge (1973). This latter form is usually rare and seems to be associated with periods of abundance. Other Orthoptera around the lake at Funtley were: *Ch. brunneus*, *Ch. parallelus* (including many of the macropterous form), *T. subulata*, *T. undulata*, *M. thalassinum*, and *P. griseoptera*. I was also pleased to find the spectacular spider, *Argiope bruennichii* here. Other Orthoptera at Titchfield Haven were *Ch. brunneus*, *Ch. parallelus*, *Ch. albomarginatus*, *Tettigonia viridissima* and *P. griseoptera*. Dr. Stephen Nicholls tells me that *C. discolor* was unusually abundant also in the New Forest, where it was found on heather near Beaulieu Road Station. Leaving Funtley I went to stay with a friend in Surrey, visiting Thursley Common on 19 August, where as well as the more widespread species, the Woodland grasshopper, *O. rufipes* and *M. brachyptera* were seen.

I left Surrey for a week's holiday in Scotland on 20 August. Whilst driving north through London I heard the characteristic

stridulation of *M. roeseli* near Wormwood Scrubs. The same evening I discovered a colony of *P. griseoptera* near Arnside (See Paul, in press. b). Most of my time in Scotland was spent on the Isle of Mull. *Ch. parallelus* and *O. viridulus* were both common and widespread on the island. On the adjacent Isle of Iona I took *M. maculatus* from hollows in the machair on the west coast of the island. Like my specimens from Barra, these Hebridean *M. maculatus* are distinctly smaller than specimens from heathland in southern England. A visit was made to Mr. Boyd Barr, who is now resident on the island. He showed me some splendid Hebridean Lepidoptera. Leaving Mull for the South, I stopped at Ravenshall Point, Gallo-way where *Ch. brunneus*, *O. viridulus* and *P. griseoptera* were seen.

There is an area of sandy heathland and peat bog near Clee Hill in Shropshire which has turned up some characteristic heathland dragonflies. Being suspicious that some corresponding Orthoptera might occur there, I visited the site on 2 September and was rewarded by finding the Bog bush-cricket, *M. brachyptera*, which is local in the Midlands. Miss H. M. Takes captured a female which has been deposited in the BM(NH). Other species present were *Ch. parallelus*, *O. viridulus*, *M. maculatus* and *T. undulata*. Later that night at 11 pm, *Ch. parallelus* and *P. griseoptera* were heard on the bank of the River Severn north of Bewdley, Worcs.

In an average year, the Orthoptera season lasts well into October in the Midlands: in 1981, for example, *M. maculatus*, *O. viridulus* and *Ch. brunneus* were heard on the Wrekin on the last day of October. The weather in September and October 1984 was cold, damp and overcast. The last native Orthoptera that I saw this year were a few *Ch. brunneus* in late September in Birmingham. Nevertheless, as I write in November, House crickets, *Acheta domesticus* L. can be heard around the Birmingham hospitals.

References

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